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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	09/868,988	
	Filing Date	November 8, 2001	
	First Named Inventor	Sture Helmersson	
	Group Art Unit	3641	
	Examiner Name	R. Palabrica	
Total Number of Pages in This Submission		Attorney Docket Number	19378.0012

ENCLOSURES (check all that apply)		
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Eric J. Franklin, Reg. No. 37,134 Swidler Berlin Shereff Friedman, LLP
Signature	
Date	July 18, 2003

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: :
: :
Helmerson et al. : Attorney Docket: 19378.0012
: :
Application No.: 09/868,988 : Art Unit: 3641
: :
Filed: November 8, 2001 : Examiner: R. Palabrica

Title: CONTROL ROD

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RESPONSE TO FINAL ACTION

EXPEDITED PROCEDURE

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Sir:

In response to the final office action issued May 13, 2003, Applicants request that the Examiner reconsider the rejections made therein. Applicants are submitting this request for reconsideration as a result of telephone interviews between the Examiner and the undersigned during which the cited reference and the invention were discussed.

Claims 2, 3, and 6-14 are now pending in this application.

The Examiner rejected claims 2, 3, 6, 7, 11, 13, and 14 under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 5,034,185 to Ueda et al.

Ueda et al. does not disclose a control rod having a cruciform center and including a plurality of recesses through the absorber blades arranged in the inner part of absorber blades along the cruciform center. The Examiner points to Fig. 36A of Ueda et al. as disclosing recesses that the Examiner equates with the recesses of the present invention. As discussed at col. 37, lines 12-29, Fig. 36A only shows a portion of the upper end of a wing of a control blade. This passage goes on to describe that an engagement recesses 633 may be formed at the top of the wing to support the blade on a support that laterally projects from an extending portion of a central tie rod. Thus, Ueda et al. does not disclose a plurality of recesses through the absorber blades arranged in the inner part of absorber blades along the cruciform center of the control rod.

Similarly, Ueda et al. does not disclose a structure that includes a control rod having a lesser mean quantity of absorber material per unit length of the control rod in an upper part than in a lower part. The Examiner cites col. 9, lines 22+ as describing a structure that includes less absorber material in an upper portion of the structure as compared to the lower portion. Actually, this passage describes just the opposite arrangement. Along these lines, Ueda et al. discloses a structure that includes a region W, shown for example in Figs. 1 and 11 that is in the upper portion of the structure.

W
look at
12A

As described at col. 9, line 22-53, in the region W, "the neutron irradiation rate is comparatively low, but the subcriticality becomes smaller with respect to this region when the control blade is fully inserted to shut down the reactor." This passage continues stating, "It is therefore necessary to pack in the region W a large amount of neutron absorber of a high reactivity worth." Ueda et al. goes on to state that, "In consequence, this region is provided with

housing holes 14a which are arranged with a reduced pitch P between the centers of the holes, as shown in FIG. 12A, or are formed by being elongated in the diametral direction corresponding to the axial direction of the control blade, and which are arranged close to each other in the axial direction, as shown in FIGS. 2A, 12C and 12D. The amount of a high-reactivity-worth neutron absorber 18 packed in the housing holes 14a is greater." As is apparent from these passages, a high amount of absorber material is present in the upper portion of the structure.

Additionally, Ueda et al. states that, "It is not necessary to increase the reactivity value of a lower region l_3 of each wing 13." Region l_3 is in the bottom half of the structure, as shown in Fig. 1. Ueda et al. goes on to state that in region l_3 are arranged gas plenums 16. The gas plenums 16 are formed of the housing holes 14 in which no neutron absorber is packed. It is apparent from these passages that Ueda et al. does not disclose a structure that includes a control rod having a lesser mean quantity of absorber material per unit length of the control rod in an upper part than in a lower part.

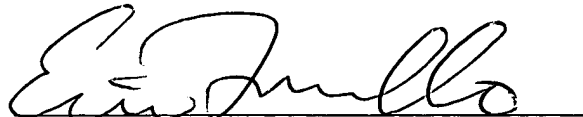
In view of the above, Applicants submit that Ueda et al. does not disclose the present invention and respectfully request reconsideration and withdrawal of the rejection. Furthermore, in view of the above, Applicants submit that this case is in condition for allowance and respectfully request favorable reconsideration of this case an early issuance of the notice of allowance.

If an interview would facilitate the prosecution of this case, Applicants urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge insufficient fees or credit overpayment associated with this communication to Deposit Account No. 19-5127, 19378.0012.

Respectfully submitted,

Date: 7-18-03

A handwritten signature in black ink, appearing to read "Eric J. Franklin", written over a horizontal line.

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